

### **DETAILED ACTION**

This application has been examined. Claims 2-3, 6-8, 13-17 are pending. Claim 17 is submitted as a new claim.

### ***Making Final***

Applicant's arguments filed 02/28/2008 have been fully considered but they are not persuasive.

The claim amendments regarding -- '*estimating processing time that the computer is expected to require to process each single response received from the delivery destinations*' -- do not overcome the disclosure by the prior art as applied in the prior Office Action, as shown below.

The Examiner is maintaining the rejection(s) using the same grounds for rejection and thus making this action FINAL.

### ***Priority***

The effective date of the subject matter claimed in the application is December 18, 2000.

### ***Information Disclosure Statement***

The Applicant is respectfully reminded that each individual associated with the filing and prosecution of a patent application has a duty of candor and good faith in dealing with the Office, which includes a duty to disclose to the Office all information known to that individual to be material to patentability as defined in 37 CFR 1.56.

There were no information disclosure statements filed with this application.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 2-3, 6-8, 13-15 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 8, 13, 14 recite a limitation for '*repeating delivery of each of the groups [of packet data] as many times as specified by said determining*' followed by a second limitation '*estimating a processing time required to handle each single response from the delivery destinations before sending the groups of data packets to the delivery destinations*'.

The Examiner notes that since the groups of data have already been delivered the estimating process cannot occur before the delivery of data to the destination.

The claim language is indefinite because the limitations indicate conditions that are mutually exclusive. The Examiner notes that the claim language is subject to misinterpretation and that a person of ordinary skill in the networking art would not be able to ascertain the scope and bounds of the claims.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-3, 6-8, 13-15, 17 rejected under 35 U.S.C. 103(a) as being unpatentable over Gemmell (US Patent 6678855) in view of Chiu et al (US Patent 6505253), hereinafter referred to as Chiu, further in view of Lo et al. (US Patent 6122483).

Gemmell disclosed (re. Claims 13 ) generating groups of data, each including at least one data packet from a given set of data packets to be delivered (Gemmell – Figure 15, Column 4 Lines 40-45) ; (re. Claims 13 ) repeating delivery of each of the groups as many times as specified by said determining (Gemmell – Column 2 Lines 25-35, Column 7 Lines 25-30); (re. Claims 13 ) determining a number of times each of the groups is delivered; (Gemmell – Column 7 Lines 25-30, Column 12 Lines 40-45);

Gemmell disclosed (re. Claim 13 ) specifying a number of delivery destinations to which data is to be delivered (Gemmell – Column 7 Lines 1-5).

However Gemmell (re. Claim 13) did not disclose wherein the delivery destinations respond to the delivery of groups of packets.

Chiu disclosed (re. Claim 13) wherein the delivery destinations respond to the delivery of groups of packets (Chiu- Column 18 Lines 10-15) according to a ACK interval (Chiu- Column 35 Lines 65) and also according to randomly selected timing (Chiu-Column 3 Lines 10-15) to prevent too many ACK messages from reaching the transmitting station at the same time (Column 8 Lines 15-20).

Chiu disclosed a rate control mechanism for multicast transmission. Chiu disclosed (re. Claim 13) , estimating a processing time (Chiu – Column 35 Lines 35-40

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'TTL scope', Column 16 Lines 30-35) required to handle each single response from the delivery destinations (Chiu-Column 22 Lines 25-30) ; (re. Claim 13) calculating a total response processing time; (Chiu – Column 35 Lines 35-40, Column 16 Lines 30-35) (re. Claim 13) delivering control information (Chiu- Column 35 Lines 45-60) including the total response processing time, (Chiu – Column 35 Lines 60-65, Column 39 Lines 30-35) to the delivery destinations so that the delivery destinations will respond at a randomly selected timing (Chiu-Column 3 Lines 10-15) within the total response processing time (Chiu – Column 35 Lines 35-40 'TTL scope', Column 16 Lines 30-35) after each group of data packets are received ;

Gemmell and Chiu are analogous art because they present concepts and practices regarding reliable transmission methods for multicasting, while accounting for the congestion rates in the network. (Gemmell – Column 1 Lines 45-50, Column 4 Lines 15-25; Chiu – Column 11 Lines 60-65) At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teachings of Chiu into methods and system of Gemmell. The suggested motivation would be, as Chiu suggests (Chiu – Column 9 Lines 35-40), the transmission rate should be high so as to fully use the bandwidth of the network, and should be sufficiently low that packets are not lost due to congestion, or to the inability of a receiver station to keep up with the transmitter.

However, Gemmell-Chiu did not disclose (re. Claim 13) *calculating a total response processing time in proportion to the estimated processing time per response and the number of delivery destinations*. Gemmell-Chiu did not disclose (re. Claim 13) estimating processing time ‘ before sending the groups of data packets to the delivery destinations’.

Lo disclosed (re. Claim 13) calculating a total response processing time in proportion to the estimated processing time per response (Lo- Column 9 Lines 35-40, ‘*response time plus propagation delays*’, Column 9 Lines 30-35, ‘*The timer interval is one in which is adequately long for each of the recipient subscriber units receiving a multicast message being transmitted on a previously specified traffic channel to respond*’) and the number of delivery destinations response (Lo-Column 6 Lines 60 thru Column 7 Lines 10)

Lo disclosed (re. Claim 13) estimating processing time required by the source computer to process the each response from the recipient computer ‘ before sending the groups of data packets to the delivery destinations’. (Lo-Column 6 Lines 60 thru Column 7 Lines 10)

Gemmell ,Chiu, and Lo are analogous art because they present concepts and practices regarding reliable transmission methods for multicasting, while accounting for

the congestion rates in the network. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teachings of Lo into methods and system of Gemmell-Chiu. The suggested motivation would be, as Lo suggests (Lo-Column 2 Lines 15-20), for multicast acknowledge message to be made while minimizing channel resources.

Gemmell-Chiu-Lo disclosed (re. Claim 2) wherein the group generating determines a number of data packets (Chiu-Column 18 Lines 15-20) included in each group (Gemmell – Column 3 Lines 55-60).

Gemmell-Chiu-Lo disclosed (re. Claim 3) wherein the group generating unit determines the total amount of data (Chiu-Column 39 30-50) included in each of data packets included in each group (Gemmell – Column 3 Lines 55-60) according to the state of a communication line or delivery destination ( Chiu- Column 39 Lines 40-50).

Gemmell-Chiu-Lo disclosed (re. Claim 6) measuring a congestion state of a system based on time needed for accessing a memory and the state of the load on a processor (Chiu - Figures 5-6, Column 13 Lines 40-50, Column 15 Lines 45-50).

Gemmell-Chiu-Lo disclosed (re. Claim 7) redelivering a previously delivered data packet when one of the delivery destinations has reported that the data packet could not be received. (Chiu – Column 16 Lines 20-25)

Claim 8 is rejected on the same basis as Claim 13.

Gemmell-Chiu-Lo disclosed (re. Claim 14) further comprising repetitively delivering (Gemmell – Column 7 Lines 25-30) the groups before the delivery destinations respond to delivery (Chiu- Column 18 Lines 10-15)

Gemmell-Chiu-Lo disclosed (re. Claim 15) wherein a number of times each of the groups generated by the group generating unit is delivered is greater than one (Gemmell – Column 7 Lines 25-30, Column 12 Lines 40-45);

Gemmell-Chiu-Lo disclosed (re. Claim 17) dividing received data into packets and generating groups of packets. ( Gemmell – Column 3 Lines 25-30)

Lo disclosed (re. Claim 17) estimating processing time required by the source computer to process the each response from the recipient computer ‘ before sending the groups of data packets to the delivery destinations’. (Lo-Column 6 Lines 60 thru Column 7 Lines 10)



***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 16 rejected under 35 U.S.C. 103(a) as being unpatentable over Gemmell (US Patent 6678855) in view of Chiu et al (US Patent 6505253), hereinafter referred to as Chiu, further in view of Lo et al. (US Patent 6122483), further in view of Bergsson et al. (US Publication 2002/0071388).

While Gemmell-Chiu-Lo substantially disclosed the invention Gemmell-Chiu-Lo did not disclose (re. Claim 16), wherein the estimating determines the processing time per response, based on measurement of processing load of the computer.

Bergsson disclosed (re. Claim 16), wherein the estimating determines the processing time per response, based on measurement of processing load of the computer. (Bergsson-Paragraph 43, *'sending terminal calculates a throughput rate based upon returned acknowledgement messages'*)

Gemmell ,Chiu, Lo and Bergsson are analogous art because they present concepts and practices regarding reliable transmission methods for multicasting, while accounting for the congestion rates in the network. At the time of the invention it would have been obvious to a person of ordinary skill in the art to combine the teachings of Bergsson into methods and system of Gemmell-Chiu-Lo. The suggested motivation would be, as Bergsson suggests (Bergsson-Paragraph 20), to allow for rapid adjustments in the transmission rates according to the system throughput.

### ***Response to Arguments***

Applicant's arguments filed 02/28/2008 have been considered but are not persuasive.

The Applicant presents the following argument(s) *[in italics]*:

*'In claim 13, however, a processing time that the computer is expected to require*

*in processing each single response received from the delivery destinations is estimated. Further, based on "the estimated processing time per response and the number of delivery destinations", the "total response processing time" is calculated. Lo does not teach or suggest such a features since Lo is related to setting a time interval for each recipient to return a response to the sender.'*

The Examiner respectfully disagrees with the Applicant.

The Examiner notes that the claimed invention essentially instructs the recipients to delay the acknowledgement signals according to a time period indicated by the source node in order not to overwhelm the source node with the ACK signals from the numerous multicast recipient nodes. The recipient nodes must wait for the indicated time period to pass before sending ACK signals.

Lo Column 6 Lines 50-65 disclosed (re. Claim 13) *the estimated processing time per response and the number of delivery destinations*. Lo Column 8 Lines 60-65 disclosed wherein said recipient nodes must wait for a specified waiting period before sending ACK signals.

### ***Conclusion***

**Examiner's Note:** Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Greg Bengzon whose telephone number is (571) 272-3944. The examiner can normally be reached on Mon. thru Fri. 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Vaughn can be reached on (571)272-3922. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/G. B./

Examiner, Art Unit 2144

/William C. Vaughn, Jr./

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